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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ़”

Jawaharlal Nehru

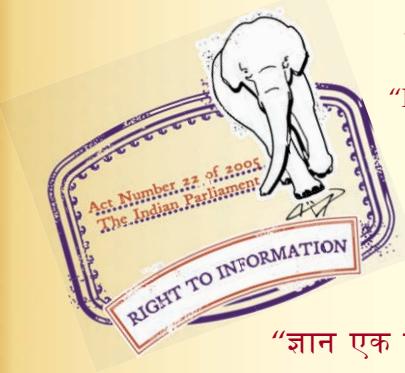
“Step Out From the Old to the New”

IS 8074 (1990): Monocrotophos S1 [FAD 1: Pesticides and Pesticides Residue Analysis]

“ज्ञान से एक नये भारत का निर्माण”

Satyanaaranay Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartṛhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”





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भारतीय मानक  
मोनोक्रोटोफोस — विलेय द्रव्य  
( दूसरा पुनरीक्षण )

*Indian Standard*

**MONOCROTOPHOSSL-SPECIFICATION**

( *Second Revision* )

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**BUREAU OF INDIAN STANDARDS**  
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## FOREWORD

This Indian Standard ( **Secord** Revision ) was adopted by the Bureau of Indian Standards on 25 May 1990, after the draft finalized by the Pesticides Sectional Committee had been approved **by** the Food **ar.d** Agricultural Division Council.

Morocrotophos EL is largely used in the control of insect and **acarine** pests of agricultural crops.

Monocrotophos SL is generally manufactured to contain 36 percent ( m/m ) of monocrotophos.

This standard was published in 1976 and first revised in 1983. It is being revised again to update its various requirements in the light of the experience gained.

In the preparation of this standard, due consideration has been given to the provisions of the *Insecticides Act*, 1968 and Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values ( revised )'. The number of significant places retained in the **rounded off value** should be the **same** as that of the specified value in this standard.

# Indian Standard

## MONOCROTOPHOS SL-SPECIFICATION ( Second Revision )

### 1 SCOPE

1.1 This standard prescribes the **requirements** and the methods of sampling and test for **monocrotophos SL**.

### 2 REFERENCE

2.1 The Indian Standards listed in Annex A are necessary adjuncts to this standard.

### 3 REQUIREMENTS

3.1 The material shall consist of **monocrotophos**, technical, dissolved in suitable solvent(s).

3.1.1 Monocrotophos, technical, employed in the formulation of this material shall conform to IS 8025 : 1990.

#### 3.2 Physical

The material shall comply with the following physical requirements.

##### 3.2.1 Description

The material shall be in the form of reddish-brown liquid. One percent ( *m/v* ) solution of the material in water may have small oily droplets.

##### 3.2.2 Cold Test

No turbidity or separation of solid matter shall occur when the material is subjected to cold test at 10°C as prescribed in 13.1 of IS 6940 : 1982 or any other lower temperature as agreed to between the purchaser and the vendor.

##### 3.2.3 Flash Point ( Abel )

When determined by the method prescribed in IS 1448 ( Part 20 ) : 1982, the flash point of the material shall be above 24.5°C.

### 3.3 Chemical

The material shall comply with the following chemical requirements.

#### 3.3.1 Monocrotophos Content

When determined by the method prescribed in Annex B of IS 8025 : 1990, the observed **monocrotophos content**, percent by mass, of any of the samples shall not differ from the declared

nominal value by more than the tolerance limits indicated below:

<i>Nominal Value, Percent</i>	<i>Tolerance Limit, Percent</i>
Up to 9	+ 10 - 5
Above 9 and below 50	± 5 } of the nominal value
50 and above	+ 5 - 3

3.3.1.1 The actual value of the monocrotophos content in the formulations shall be calculated to the second decimal place and then rounding off to the first decimal place before applying the tolerances given in 3.3.1.

3.3.1.2 The average monocrotophos content of all the samples taken shall not be less than the declared nominal content.

#### 3.3.2 *Free Aceto-Acetic Acid Monomethyl-amide ( MMA ) Content*

When determined by the method prescribed in Annex C of IS 8025 : 1990, the free MMA content shall be not more than 4.0 percent by mass.

#### 3.3.3 Acidity

When determined by the method prescribed in 13.5.4 of IS 6940 : 1982, acidity ( as  $H_2SO_4$  ), shall be not more than 2.5 percent by mass.

### 4 PACKING

4.1 The material shall be packed as per the requirements given in IS 8190 ( Part 2 ) : 1988.

### 5 MARKING

5.1 The containers shall be securely closed and shall bear legibly and indelibly the following information in addition to the information required under the **Insecticides Act, 1968** and Rules framed thereunder:

- a) Name of the material;
- b) Indication of the source of manufacture;
- c) Date of manufacture and date of expiry;
- d) Batch number;
- e) Net volume of contents;
- f) Nominal **monocrotophos content**, percent ( *m/m* ); and

g) The cautionary notice worded as in *Insecticides Act, 1968* and Rules framed thereunder.

## 6 SAMPLING

**6.1** Representative samples of the material shall be drawn as prescribed in IS 10627 : 1983.

## 7 TESTS

**7.1** Tests shall be carried out as prescribed in 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.3.2 and 3.3.3.

**7.2** For determination of monocrotophos

content and free aceto-acetic acid monomethylamide ( MMA ) content, weigh about 8.0 g of sample. The absorbance of the complex formed may be measured at 544 nm.

## 7.3 Quality of Reagents

Unless specified otherwise, pure chemicals and distilled water ( see IS 1070 : 1977 ) shall be employed in tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

## ANNEX A

( Clause 2 )

IS No.	Title	IS No.	Title
1070 : 1977	Water for general laboratory use ( second revision )	8025 : 1990	Monocrotophos, technical ( second revision )
1448 ( Part 20 ) : 1982	Determination of flash point by Abel apparatus ( first revision )	8190 ( Part 2 ) : 1988	Requirement for packing of pesticides : Part 2 Liquid pesticides ( second revision )
6940 : 1982	Methods of test for pesticides and their formulations ( first revision )	10627 : 1983	Methods for sampling of pesticidal formulations.

AMENDMENT NO. 1 MAY 1994  
TO  
**IS 8074 : 1990 MONOCROTOPHOS SL**  
**—SPECIFICATION**

(Second *Revision* )

( *Page* 1, *clause 3.2.1* ) — Substitute the following for the existing:

*'3.2.1 Description — The material shall be in the form of radish brown liquid, one percent (m/v) solution of the material in water can be turbid with small oily droplets.'*

( *Page* 2, clause 6.1 ) — Substitute the **following** for the existing:

*'When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627 :1983. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause 3.3.1 of the standard.'*

AMENDMENT NO. 2 MAY 2002  
TO  
IS 8074 : 1990 MONOCROTOPHOS SL —  
SPECIFICATION  
*( Second Revision )*

( *Page 1, clause 3.3.1, lines 3 and 4* ) — Delete the words 'of any of the samples'.

( *Page 1, clause 3.3.1.2* ) — Delete.

(FAD 1)